

## FLASHTOASTER FOR READING SEVERAL TYPES OF FLASH MEMORY CARDS WITH OR WITHOUT A PC

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US6438638 (B1)

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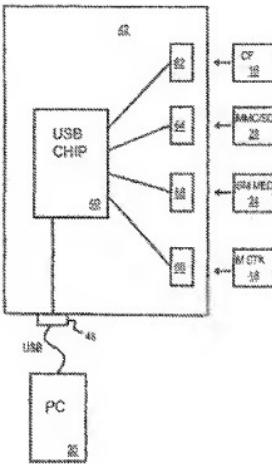
### Cited documents:

US6264506 (B1)

US6075706 (A)

### Abstract of WO 0205102 (A1)

A flash-memory-card reader (42) reads and writes multiple types of flash-memory cards (16, 18, 24, 28, 26), including CompactFlash (16), and the smaller SmartMedia (24), MultiMediaCard (26), Secure Digital (28), and Memory Stick (18). A converter chip (40) converts the different card signals for transfer to a host personal computer (PC) (20). Serial-to-parallel data conversion is performed for the smaller card formats with serial data interfaces, but not for CompactFlash with a parallel-data-interface. A single slot (22) is a 50-pin connector for CompactFlash cards (16) or a passive adapter (30, 32, 34). The passive adapters have the CompactFlash (16, 28, 24, 18) form factor and a smaller connector fitting smaller flash cards (30, 34, 32). Passive adapters have no components but simply wire the smaller connector to the CompactFlash connector (62, 64, 66, 68). A pin mapping allows card-type detection by sensing the LSB address pins of the CompactFlash interface. A larger CompactFlash reader (42) has multiple slots (44) for each card type. The reader (42) is connected to the PC by a cable (46), or located within the PC chassis in a drive bay. A stand-alone reader (42) copies images from the flash-memory card (16) to a removable disk media. Pressing a button initiates image transfer.



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